

CLAIMS

1. An automotive air conditioning system having an air conditioning unit which constitutes an airflow path into a passenger compartment and which is disposed
5 substantially at a transversely central portion in a front part of the passenger compartment,
a rear-face duct portion for guiding conditioned air towards the upper bodies of rear-seat occupants, and
10 a foot duct portion for guiding conditioned air towards the lower halves the bodies of front-seat and rear-seat occupants, the rear-face duct portion and the foot duct portion being disposed at a longitudinally rearward location in the air conditioning
15 unit, wherein, at an upper location in the air conditioning unit, a rear face inlet, through which the conditioned air is allowed to flow out into the rear face duct portion, is made to open substantially at a transversely central portion, and a foot inlet, through
20 which the conditioned air is allowed to flow out into the foot duct portion, is made to open transversely outwardly of the rear face inlet in transverse alignment therewith, the rear face duct portion and the foot duct portion which extend downwardly from the respective inlets for so
25 guiding the conditioned air being disposed in transverse alignment with each other.

2. An automotive air conditioning system as set forth in Claim 1, wherein a front face opening for delivering conditioned air towards the upper bodies of
30 the front seat occupants is formed above both the inlets 25, 28, and the front face opening and the foot inlet are selectively opened and closed by a main plate portion of a single door member, and wherein the door member has a communicating portion provided in the main plate portion
35 in such a manner as to correspond to the rear face inlet and a sub-plate portion adapted to rotate with the main plate portion in an interlocking fashion so as to close

the rear face inlet, whereby in a state in which the main plate portion opens the front face opening while closing the foot inlet, the communicating portion and the rear face inlet are allowed to communicate with each other while the sub-plate portion opens the rear face inlet, whereas in a state in which the main plate portion opens the foot inlet while closing the front face opening, the sub-plate portion closes the rear face inlet.

3. An automotive air conditioning system as set forth in Claim 2, wherein the front face opening has a side face opening portion which is made to open substantially at a transversely central portion in the upper location of the air conditioning unit and to which a side face duct for blowing out air from transversely end portions within the passenger compartment towards the upper bodies of the front-seat occupants and vehicle front side window glasses is connected and a center face opening portion which is made to open in such a manner as to be aligned with the side face opening portion transversely outwardly in the upper location of the air conditioning unit and to which a center face duct for blowing out air from a central portion within the passenger compartment towards upper halves the bodies of the front-seat occupants is connected, whereby in a state in which the main plate portion closes the front face opening, the main plate portion closes the center face opening portion while the communicating portion and the side face opening portion are allowed to communicate with each other.

4. An automotive air conditioning system as set forth in Claim 2, wherein a seal portion formed of an elastic member is formed around a periphery of the sub-plate portion.

5. An automotive air conditioning system as set forth in Claim 2, wherein a connecting portion between the main plate portion and the sub-plate portion adopts an elastic construction or is formed of an elastic

member.

6. An automotive air conditioning system as set forth in Claim 1, further having a rotational shaft which is rotationally supported relative to the air conditioning unit, wherein the main plate portion is fixed to the rotational shaft at one end portion thereof and is provided so as to rotate in conjunction with the rotation of the rotational shaft, wherein the sub-plate portion is fixed to the main-plate portion via a connecting portion having a predetermined rotational distance.

7. An automotive air conditioning system as set forth in Claim 6, wherein the predetermined rotational distance is a rotational distance over which the main-plate portion covers a state in which the main-plate portion closes the front face opening and a state in which the main-plate portion closes the foot duct portion.